

PHILADELPHIA MEDICAL TIMES.

PHILADELPHIA, DECEMBER 23, 1876.

ORIGINAL COMMUNICATIONS.

ON MATERNAL IMPRESSIONS AFFECTING THE FŒTUS.

BY E. SEGUIN, M.D.

THE issue of the *Philadelphia Medical Times* of the 25th of November contains a communication from Dr. W. T. Taylor, with a description of cases in which maternal impressions during pregnancy have apparently caused deformity or arrest of development, or have otherwise injured the fœtus.

This communication of Dr. T. is not only a valuable contribution to the literature of the subject, but an invitation to all of us to bring together the results of our individual experience and creditable information.

I answer this call by citing the following cases:

1. An officer of the old Napoleon, known for his bravery in the field, would become pale and faint at the sight of a naked parlor-sword. It was well known that before he was born his father had all but killed his mother with such an arm in a fit of jealousy.

2. In 1842, '43, '44, I attended a girl called Emma (the subject of my XI. observation in "*Traitement moral, hygiène, et éducation des idiots*," Paris, J. B. Baillière, 1846). The backwardness of her mind and her physical restlessness were attributed to the anxiety of her pregnant mother for the safety of her husband engaged in the civil wars of Paris. All the other (6) children were remarkably above the average.

3. Mrs. D., a very refined woman of temperate habits, was no sooner pregnant with her fourth child than she began to drink a quart of brandy a day, and continued to do so, her head being never affected, till delivered of a boy. Though she and her husband were remarkably swarthy, her child was pearly white,* with the lightest red hair, myopic and idiotic. She has never touched brandy since. (Obs. II., from "*Idiocy and its Treatment by the Physiological Method*." New York: W. A. Wood

& Co., 1866.) In the two following observations, the morbid influence of the mother on the child seems to be traceable during the lactation.

4. Madam B. came out overheated from a ball-room, gave the breast to her baby three months old; he was taken with spasms two hours after, and since is a confirmed idiot and epileptic. (Obs. VI., from "*Idiocy*," etc.)

5. In a moment of great anxiety, Mrs. C. jumped in a carriage with her suckling, a girl of fifteen months, so far very intelligent and attractive. The child took the breast only once in a journey of twenty miles, but before arriving at the destination she vomited several times, with no other interruption than that of coma; and after an acute continuous fever settled down into the condition of a cripple and an idiot. (Obs. VII., from "*Idiocy*," etc.)

6. Mrs. H., ignoring that she was with a second child, continued to nurse with her own milk her first born. This one, eight months old, from rosy became waxy; her head seemed to grow larger,—as it probably did, but was not measured,—and a few months later it measured twenty-six inches in circumference: the nutrition of the second child prevented that of the first, and hydrocephalus with idiocy followed the deficiency of nutrition. (Obs. X., from "*Idiocy*," etc.)

7. Since the XLIII. observation of the same book was written, I have learned some details of its probable etiology worth preserving. The mother of Blind Tom, a Georgia slave, went to Columbus once a week to sell the small produce of the plantation. She had her stand opposite a drug-store, whose sign represented a boy pounding drugs in a mortar. When pregnant, she could not take her eyes off of that picture; and when Blind Tom was not playing the piano for his master, he used to stand in the same attitude as the drug clerk. I remember him in this attitude quite distinctly at a hotel in New York.

8. A pregnant woman longed for a dish of ham, and her husband, a physician of my own family, thought this a good opportunity to try the reality of the doctrine of the "*envies de femme grosse*." The ham was not served to the lady, but her girl was born with marks not unlike cooked ham on the back of the head and on the

*It is a popular belief in France that the use of brandy by the mother whitens the skin of the fœtus.

legs. Nobody else in the family was ever known to have *nævi materni*.

9. Madam M., the wife of a well-to-do farmer in Stark County, Ohio, after serving a tramp a pot of milk and bread on the table in front of her house, saw that the man had no left hand. She, from her stoop, looked at him fixedly all the while till he left, then she re-entered her room crying, "My child will be born with but one hand," and in due time (two months later) it so happened. I have seen the child, four years old, fine in every respect excepting on the left side.

10. One of the most interesting cases of degenerescence of organs starting from the time of gestation, is that of P. G., aged

13. During her pregnancy, his mother had trouble. That is too often all that is said to us about the etiology of these cases. G. was healthy, but could not learn anything, and for all purposes was like an idiot. But his mother, being highly intelligent and devoted, saw that the affection was peripheric, and the sensorium commune (where all the perceptions are stored and taken from when wanted) was unimpaired; and she undertook his education accordingly. The nerves of vision and audition being partially atrophied (St. John B. Roosa's diagnosis), the voice remaining a whisper, and the articulation imperfect, the mother saw for her child where he could not see, and pointed out to him what he could, but was unable at first to discern. She heard for him and read for him, yet made him read, write, count, exercise, use tools, etc., as far as his senses would allow. What she could not teach him in Boston, or from books, she taught tangibly in Germany, France, Italy, in the Alps, or in the mines, museums, and factories. Neglected, G. would have exhibited a typical case of idiocy of peripheric origin; trained by his mother, his mind is clear and judicious behind the curtain of cloudy senses. Obedient and loving, wise and dexterous, fond of nature, gardening, and carpentry, he won the respect of all wherever he went, of Niemeyer, once his physician, as of the boys who play with him on the sidewalk. He will make more progress yet.

In my report on education at the Vienna International Exhibition of 1873, I exemplified this position in regard to pre-natal education by several cases, from which I quote this:

11. Madam R., being alone with her sick husband in a country-house at night, saw somebody, wrapped in a sheet for a disguise, trying to force an entrance. She, unarmed and unaided, cried out, pushed and piled heavy furniture against the door, and succeeded in repulsing the intruder. She soon after gave birth to a healthy male child; but who, at the hour at which this struggle took place, would every night scream as if in terror. At all other times he was good-humored; but no medical treatment could prevent him from awakening and screaming at that precise hour. This habit disappeared, be it noted, when he was severed from the breast of his mother.

During the period of gestation, the feelings come mainly through reflex impressions from the mother; a process which not only lays the foundation of life and vitality, but forms the deeper strata of the moral disposition and of the so-called innate ideas.

"Physicians, we can certify that when our hands receive a new-comer, we read quite plainly upon his features on what sort of feeling he was bred, by that intra-uterine education whose imprints trace the channel of future sympathies and abilities. Therefore, as it is noble work to educate or to cure the idiot, the insane, the hemiplegic, the epileptic, etc.; how much higher is the work of preventing these degeneracies in the incipient being by averting those commotions which storm him in the holy region intended for a terrestrial paradise during the period of foetal evolution!" ("Reports of the U. S. Commissioners to the Vienna Exhibition," t. ii.)

After answering to the best of our ability to the call of Dr. W. T. Taylor for information on "maternal impressions affecting the foetus," let us remark that the same inquiry has recently been put before the profession by a constituted body of physicians, in the following terms:

"The superintendents of the American institutions for the improvement of idiots and feeble-minded children having formed an association for the more rapid advance and spread of their special part of medical science, resolved not only to unite their efforts, but to seek the assistance of physicians in general practice who can help them to elucidate the causes of idiocy and kindred affections.

"Previously, when searching individu-

ally for these causes, we met with three obstacles: one from the parents, whose ignorance or false delicacy would not, or could not, tell the truth; second, one from our mode of procedure, which was to not communicate nor put in common the findings of our individual experience; and a third, worse yet, to send abroad printed inquiries whose specifications were so worded by concealed theories as to force the answers towards biased issues, thereby rendering these data untrustworthy, if not truthless.

"Now, knowing better from experience, we send you no syllabus, but we rely upon your own intelligence to write a short communication of the causes of idiocy which have come to your knowledge from reliable witnesses or personal observation.

"The names will be either omitted or made use of at your request.

"Please address, as soon as convenient, the Secretary of the Association, I. N. KERLIN, M.D., Superintendent of the Pennsylvania Training School for Feeble-Minded Children, Media, Pa."

Is not this a sign of our times, and a good sign too, that more is demanded by all from the experimental knowledge of each one, and that instead of begging the question we beg more light on all questions?

In this question of the causes which act as factors in the production of children of a retrograde or monstrous type, we cannot be too earnest, since every one of them born a cripple cripples at least one of the well-built ones to take care of him; so that for one thousand idiots, etc., there are two thousand useless beings. Besides, are these questions our "noli me tangere."

CASES OF COMPOUND FRACTURE OF THE SKULL, OCCURRING IN CHILDREN; WITH REMARKS.

BY JOHN ASHHURST, JR., M.D.,

Surgeon to the Episcopal Hospital, Surgeon to the Children's Hospital, etc.

Read before the Pathological Society of Philadelphia, Oct. 26, 1876.

CASE I.—*Compound, depressed, non-impacted fracture of skull, with symptoms of intra-cranial injury; removal of fragment; recovery.*—Mary L., eight years of age, was admitted to the Children's Hospital on August 23, 1876, having been injured a short time before by a brick falling upon her head from a building which she was passing. She had had five convulsions before she was brought to the hospital, and, after admission, vomited

twice, seemed dull, and was evidently suffering from the condition of so-called cerebral concussion. There was a longitudinal, contused wound over the synciput, and at the anterior extremity of the wound the finger readily recognized an irregularly depressed fracture, one side of the broken part being sunk below the level of the rest of the skull, while the other side was elevated, the fragment, too, being slightly movable and obviously unimpacted.

As whatever risk would follow the exposure of the membranes had already been incurred, the wound was enlarged as much as was necessary, and the detached fragment, which in shape corresponded pretty closely to the form of a right-angled triangle, and the sides of which measured respectively fourteen, nineteen, and twenty-one sixteenths of an inch, was removed, this being readily accomplished with the elevator and forceps, and without enlarging the opening which already existed. The membranes of the brain were found to be uninjured, and could be felt and seen pulsating synchronously with the heart's action at the bottom of the wound.

[Specimen exhibited.]

The wound was then closed, but not too tightly, with lead-wire sutures and gauze and collodion, the patient put to bed in a darkened room, and cold cloths and ice-bags applied to the head. Small but frequently repeated doses of calomel and Dover's powder were ordered; care was taken to evacuate the bladder at suitable intervals by means of the catheter, and, after the first day, the patient was regularly and systematically fed every two hours with milk and lime-water. For some days she lay perfectly quiet, complaining of no pain, rational, but indisposed to speak, and curled up in the peculiar position so characteristic of the second stage of cerebral concussion.

It is unnecessary to give all the details of treatment. The bowels were moved every two or three days, by the aid of enemata. Quinia was given on the ninth day, at first tentatively, and afterwards in larger doses; the patient's diet was gradually increased, and on the nineteenth day she was moved into the general ward as thoroughly convalescent. She is now quite well, her wound having been entirely healed for nearly a fortnight.

CASE II.—*Compound, depressed, impacted fracture of the skull, without symptoms of intra-cranial injury until the sixteenth day; trephining; death from cerebral abscess on the thirty-second day.*—Daniel M., seven years of age, was admitted to the Children's Hospital about midnight on September 8, 1876, having a few hours before received a severe blow on the forehead from a shovel wielded by one of the participators in a personal combat, in which his reputed stepfather had engaged with other denizens of the tenement-house which served as his home. I saw him about an hour after his admission, and found a

starred and much retracted wound of the forehead, leading to a slightly depressed, cambered, impacted fracture of the right side of the frontal bone. The patient was in very good general condition, and had, and had had, absolutely no symptoms of any injury to the brain.

As there was no indication for operative interference, the wound was simply closed with adhesive strips, the patient put to bed with an ice-bag to his head, and placed upon constitutional and dietetic treatment, as in the preceding case. On the fifteenth day (September 23) he appeared to be so well that the ice-bag was removed, his diet was somewhat increased, and he was moved into the general ward. The next morning, the sixteenth day since the reception of the injury, the patient vomited once, apparently from having indulged his appetite too freely, but seemed otherwise as well as usual. In the afternoon, however, he was suddenly seized with convulsions, principally of the left side, and accompanied with complete unconsciousness, biting of the tongue, and slight frothing at the mouth. I was immediately sent for, and, on arriving at the hospital, explored the wound, and found slight indications that the external table of the skull at the seat of fracture was beginning to separate. The crown of a small trephine was then applied, half over the fractured part and half on the sound skull, and as soon as the outer table had been penetrated, a little pus welled up alongside of the instrument. A disk of the outer table came away in the trephine, and the corresponding portion of the inner table was removed with the forceps, when no difficulty was found in elevating the remainder of the depressed bone. The convulsions, which had persisted all through the operation, now instantly ceased, the dusky hue of the countenance quickly disappeared, and it was evident that the imminence of death had, for the time at least, been averted. The membranes pulsed synchronously with the heart's action, and were seen to be intact. The patient was now again placed in the darkened room, the ice-bags reapplied, and in fact the original treatment of the case repeated *de novo*. With the exception of a little fever, everything seemed to go well for about a week, when the tongue became and continued furred, and vomiting set in, at first only once or twice a day, but afterwards more frequently. The patient now began to emaciate, his pulse was preternaturally slow, and he became soporose, though always easily roused and perfectly rational when spoken to. On the thirteenth day after the operation (twenty-ninth since the injury) these symptoms were more marked the tongue had become dry, and the patient occasionally screamed out, complaining, too, of constant headache. The next day (October 8) I noticed for the first time that the tongue was protruded to the left side. The day fol-

lowing there was slight facial paralysis, and still a day later (the last of life), decided left hemiplegia. Death ensued a few hours after my last visit, the patient gradually becoming weaker and duller, though not until the end completely comatose.

An autopsy was made about fifteen hours after death by Dr. Chapman, the coroner's physician. The head only was examined. The scalp having been turned down, the seat of fracture was revealed, the portion of bone which had been depressed being found in its normal position, and the perforation made by the trephine being evenly filled with granulations. When the skull-cap was removed, the membranes were found congested and their veins engorged with blood; but they were entire, and there was but very slight evidence of meningitis, and that chiefly on the left side. A large abscess was found in the anterior lobe of the right cerebral hemisphere, covered, in the part nearest the fracture, by a layer of healthy brain-substance fully half an inch in thickness, but approaching nearer the surface at a point lower and farther to the right. The ventricles on both sides contained more fluid than usual, but were otherwise normal.

[Specimen exhibited.]

Remarks.—These cases, interesting in themselves, are particularly so as serving to illustrate some important points in the pathology of head-injuries. In the first place, they furnish examples of the deceptive character of these lesions, and of the rule often insisted upon, that the amount of damage done to the brain is apt to be inversely proportionate to that inflicted upon the skull.

The subject of the first case, Mary L., was injured by a heavy body falling from a great distance, and of course with great momentum; and the immediate effects of the blow were seen in the entire separation of a large fragment of the skull from its attachments, and in the early and repeated convulsions, the subsequent vomiting, and the long persistence of the state described by Mr. Erichsen and other writers as "cerebral irritation," but which, it seems to me, should be regarded as simply the second stage of the condition known as cerebral "concussion." At the same time, as the sequel showed, the force of the blow had been mainly expended upon the skull; the shock to the brain, though rude, led to no permanent organic change; and the patient's convalescence, though slow, was uninterrupted.

In the second case, on the other hand, the cause of the injury was comparatively slight; the skull was broken indeed, but

the fragment was not separated, and but slightly depressed. There were at first absolutely no symptoms of intra-cranial lesion; and when the occurrence of supuration between the inner and outer tables at the seat of fracture gave rise to convulsions, and required the application of the trephine, the membranes of the brain were found entirely intact, and with the elevation of the depressed portion of bone the convulsions instantly and definitively ceased. Yet, at the moment of injury, the skull measurably resisting the force of the blow, its effects were transmitted indirectly (by the *contrecoup* or "counter-stroke" of the older writers) to the substance of the cerebrum itself, where at a very considerable depth some slight laceration or contusion of the brain-substance occurred,—laceration so slight as to give no sign of its presence until several weeks afterwards, and yet sufficient to prove the starting-point of the large abscess which ultimately brought the case to a fatal termination.

Again, the second case is of interest as bearing upon the question of diagnosis between intra-cranial inflammation and suppuration, between meningitis and cerebral abscess. As is well known, it is often quite impossible to distinguish between these conditions, so that, as one of the best modern writers on head-injuries (Mr. Jonathan Hutchinson) justly remarks, if we adopt the rule of trephining in all cases in which, after bruise or fracture of the skull, the patient has become hemiplegic or comatose, with inflammatory symptoms, we will operate in twenty cases of arachnitis for one in which we will find any pus to be evacuated. And it is equally impossible in most cases to determine the seat of suppuration, even when it is believed to be present.

In the case under consideration, however, I was able by careful observation of the symptoms, and of the order in which they were developed, to satisfy myself pretty conclusively that the patient was suffering from a cerebral abscess, and that its position was remote from the point of external injury; at the same time, I hoped against belief, and thought it but right, on the chance of my being mistaken, to adopt such treatment as would have been suitable in a case of meningitis.

I believed that the symptoms were due to deep-seated abscess, because, first, I knew

that at the time of the operation the membranes had been uninjured, and I had daily watched them pulsating at the bottom of the wound, until the healthy granulations which covered them had filled up the perforation made by the trephine and had begun to creep over the neighboring portions of the skull; this was of itself almost enough to negative the idea of meningeal trouble, whether simply inflammatory or suppurative. Secondly, the trophic much preceded in time the pressure symptoms. For days before there was the slightest evidence of paralysis, the patient had been rapidly emaciating, and was evidently perishing from some destructive visceral affection; the first deviation of the tongue, it will be remembered, was noticed but two days before death, drawing of the mouth a day later, and general hemiplegia but a few hours before the fatal issue; this state of things obviously pointed to the brain itself rather than the membranes as the seat of change, for when the meninges are affected paralysis is usually a comparatively early symptom.

Other diagnostic points were the absence of fever and delirium, the slow pulse, and the nature of the pain, which was a dull aching, seldom complained of unless the patient was questioned, and not the intolerable, mind-absorbing agony of meningeal inflammation.

I say nothing of the treatment of these cases, because, though suggesting questions of interest, therapeutics are, in my judgment, out of order in the discussions of this Society.

FRACTURE OF THIGH DURING TURNING.

BY GERALD D. O'FARRELL, M.D.,

ON Monday night, November 5, I was called to see Mrs. J. M., aged 42 years, German, eighth pregnancy. On making an examination, I found an arm protruding from the vagina, the membranes ruptured, and the liquor amnii all discharged. Recognizing the danger to mother and child, I requested that another physician should be called, and, shortly after, Dr. C. J. Nice was in attendance.

It being agreed that turning presented the only chance of saving the life of either mother or child, I placed the woman on her left side near the edge of the bed, and, making a more careful examination, found a shoulder and arm presentation, the child lying transversely

in the uterus, the nates and lower extremities being directed towards one ilium, and the head to the other, and the abdomen of the child backward to the spine of the mother. The uterus embraced the child firmly, and yet, owing, I supposed, to the shock, the mother was conscious of no pain. The shoulder and thorax were firmly impacted in the pelvis. Passing my hand cautiously up between the presenting shoulder and the front of the pelvis, and gradually working it forward, I succeeded with much difficulty, so forcibly was the uterus contracting, in laying hold of one foot; I found it impossible to get the other, and under the circumstances did not deem it safe to try. As soon as I made traction on the limb, something gave way with an audible snap. Not pausing, however, I completed the delivery in a very few minutes. On examining the child immediately afterwards, we found that the right femur, the one I could not find, was fractured at the junction of the upper and middle thirds. The leg was dressed temporarily that night, and on the following morning was put on a double inclined plane made of stiff leather, similar to those we were in the habit of using in the army during the war, made of hickory bark freshly stripped from the tree, and modelled by placing it on the sound limb for a few hours.

The placenta came away readily, and the mother was put on calomel and opium—the fourth of a grain of the former with a grain of the latter—and one-sixteenth of a grain of tartar emetic every two hours, which was continued for two days. The woman recovered without a bad symptom, and I was able to remove the splint from the child's leg at the end of the third week, when one leg seemed to be just as good as the other. It seemed strange to me that the woman never felt any pain, save that, when I was passing my hand up the uterus, she felt, to use her own expression, "as if her inside must burst."

NOTES OF HOSPITAL PRACTICE.

EPISCOPAL HOSPITAL.

SERVICE OF DR. JOHN H. PACKARD.

Reported by OLIVER ROLAND, M.D., Resident Surgeon.

CASE OF PUNCTURED WOUND OF THE BRAIN.

F S. S., æt. 22, a blacksmith by occupation, was admitted to the wards of the Episcopal Hospital about eleven o'clock on the night of November 5, 1876. He was under the influence of liquor at the time, and was very much excited.

On examination, part of the small blade of a pocket-knife was found imbedded in the skull, the broken end about on a level with the scalp, slightly on the left side,

about five and one-fourth inches from the lobe of left ear, and about five inches from the nape of the neck. The scalp-wound had been enlarged and efforts to extract the blade made before his admission. There were several minor contusions of his hands, and the history of the case was that all these injuries had been received in a fight two or three hours previously.

Careful efforts at extraction with the strongest forceps failed to remove the piece, both on account of the difficulty of securing a firm grasp and the fear of breaking it. Consequently, a lint compress was fastened over the wound, a full dose of bromide of potassium given, and an ice-bag applied to his head. In half an hour the man was asleep, and slept soundly the rest of the night. In the morning he complained of severe pain in his head, located at the seat of injury. No other brain-symptoms had yet manifested themselves. He was given Rochelle salts $\mathfrak{z}\text{i}$. His urine he passed freely.

About 10.30 A.M. Dr. Packard saw him, when under ether; efforts at extraction were again made, but without success. A small trephine, the pin of which had been removed, was then slipped over the projecting part of the knife-blade and applied to the skull. It was not until both tables of the bone had been perforated, however, that the blade could be withdrawn. It was found to have penetrated the left hemisphere of the brain to the depth of about one-fourth of an inch; the whole length of the blade removed being about one and one-fourth inches.

He reacted from the operation quickly; ice was again applied, his head having been shaved, and continued through the whole treatment. The rest of the day and night was passed pretty comfortably, but on the following morning (November 7) considerable fever and heat of head were noted, with some sickness of stomach, and about nine o'clock he was taken with what very much resembled an epileptic fit, was totally unconscious, pupils contracted, frothed at the mouth, and had violent muscular spasms; the whole lasting about twenty minutes. He had no recollection of what had occurred, but was perfectly rational till about twelve o'clock, when he had another convulsion, followed by great restlessness and delirium. There was profuse sweating, pulse 110, full and quick, respiration not much disturbed. Whenever he was moved

he uttered a peculiar, sharp, shrill cry. The delirium rapidly increased during the afternoon and night, interrupted occasionally by convulsions. During the afternoon 3vi of blood were taken from the back of his neck by cupping, and his bowels freely opened by stimulating enemata, giving temporary relief.

November 8.—The delirium had subsided into stupor; breathing stertorous, accompanied by a peculiar whiff; pupils contracted; pulse 60, full and slow; urine and faeces passed unconsciously. It was also noticed that he did not move his right arm or leg, and about 3iv of blood were again extracted from the nape of his neck.

November 9.—Symptoms much the same; coma fully marked; eyes filmy; sordes about the teeth; occasional rigors; and thus he remained till about 6 P.M., November 10, when he died.

The treatment employed was the administration of opium, gr. $\frac{1}{4}$, with calomel, gr. i every three hours. Bromide of potassium, gr. xx, was at first alternated with this. Morphia hypodermically. Free purgation aided by stimulating enemata. Bleeding by cut cups from the back of the neck. The diet was exclusively milk and beef-tea.

The post-mortem examination revealed an abscess of the brain immediately under the seat of injury, together with the diffusion of pus over the greater part of the upper surface of the left hemisphere of the brain. There was no fracture of the skull.

TRANSLATIONS.

ON THE INFLUENCE OF THE CONTINUOUS GALVANIC CURRENT ON NEW FORMATIONS (*Russian Military Medical Journal*).

—Dr. E. Polikowsky, of St. Petersburg, states that quite satisfactory results in the treatment of cancer by the galvanic current, obtained by Nestel, Boconelle, Manfredini, and by Mussé, induced the author to investigate the action of the same agent on animals affected with cancer and sarcoma.

The author's experiments differed from those performed on man in that he determined exactly the histological character of the swelling before the séance, immediately after it, after the lapse of some days, near and at some distance from the points of

application of the electrodes, using various strengths of the current, etc. For the determination of the strength of the current a galvanometer, brought within the circuit, was used. The duration of each séance was twenty minutes. The séances were without the use of chloroform.

The conclusions which have been arrived at by the author are as follows:

1. A weak current (declination of the galvanometer from five to ten degrees; decomposition of water by it 0.016 cubic centimetres a minute) produced at the places of the application of the electrodes a compression of the small vessels, obliteration of the capillaries, and a small amount of extravasation. These phenomena disappeared within two days.

2. A stronger current (declination of the galvanometer forty-five degrees) produced a destruction of the tissue at the points of application of the electrodes. These destructions showed themselves in the form of scars: on the — pole the scar was soft, jelly-like, porous, mixed with bubbles of gas; on the + pole it was dry, resembling that produced by a strong acid. The size of the scars was in proportion to the prolongation and the strength of the current. Parts of the swelling of one-half to one centimetre distance from the points of application of the electrodes, examined immediately after the séance, showed an increase in bulk of the elements of the swelling, a fine granular appearance, obliteration of the capillaries or a compression of the small vessels, or a cone-like dilatation of them. Extravasation and dilatation were here produced by the compression of the vessels; the latter being obliterated in some limited spaces, giving rise to a greater pressure in the vessels and to a subsequent passive dilatation of them. These same places of the swelling, examined two to four days later, showed inside of the dilatation the formation of clots, with a retrogressive change in the centre. Around the closed and compressed vessels a fine granular degeneration was seen, which by-and-by assumed the character of a colloid metamorphosis.

The action of the current consists only in the destruction of the swelling at the points of application of the electrodes, and in the stopping of the circulation of the blood within the limits of the action of the current. The tissue, losing its supply of blood, undergoes retrogressive

changes, degeneration, and colloid metamorphosis.

A weak current, as mentioned above, does not produce any changes; a cancer was not altered by it, and a sarcoma was even increased.

A strong current destroys both swellings; a cancer is destroyed by a comparatively weaker current than a sarcoma.

A fine cellular cancer, of the size of a small hen's-egg, was entirely destroyed during thirteen séances within forty-two days. The strength of the current used would be capable of decomposing 9.18 cubic centimetres of water. The same quantity of the current could be used within a shorter lapse of time with the same result.

CHANGES IN THE BRAIN AND CARDIAC GANGLIA IN HYDROPHOBIA.—Wassilieff (*Centralbl. f. Med.*, 1876, No. 36) examined the brain and heart of a woman of 32, who had succumbed to hydrophobia in Botkin's clinic, at St. Petersburg. The various portions of the brain, etc., were examined microscopically, with the following results. A few nerve-cells of the medulla oblongata appeared cloudy, with ill-defined outline and indistinct nuclei. Similar but more strongly marked appearances were observed in the cells of Purkinje of the cerebellum. In the interstitial tissue of the brain a large collection of indifferent round elements were observed, whose size was about that of white blood-corpuscles, and which colored strongly. These were probably white corpuscles which had emigrated; they were situated for the most part in the perivascular spaces, or in the immediate neighborhood, though occasionally grouped together to the number of six to ten at some distance from the vessels in the neuroglia (proliferated neuroglia nuclei?). Finally, some of these cells were found in the pericellular spaces, and, in fact, even in the protoplasm of the nerve-cells. The blood-vessels were greatly distended and stuffed with blood-corpuscles, their endothelium swollen in places, and here and there vessels could be seen whose walls were composed of a finely granular, strongly refractive, yellowish substance, insoluble in alcohol or turpentine. The most noticeable appearance, however, was the presence (principally in the cortical portion of the hemispheres) of a peculiar, smooth, shining, strongly refracting substance in the perivascular spaces. Occa-

sionally this substance was collected about a vessel in such a way that on section the latter appeared surrounded by an irregular ring, which seemed to compress the vessel to a smaller calibre. In other instances this (according to Benedict hyaloid) substance was so collected about the vessels in little aggregations, sometimes so regularly arranged, that the collective picture reminded one of epithelium. This hyaloid substance was not colored by any staining fluid, was insoluble in strong alkalies and acids as well as alcohol and turpentine. Negative results with the reaction for amyloid substances. In other portions of the brain the perivascular spaces were more or less enlarged.

The nerve-ganglia of the human heart lie almost exclusively about the upper portion of the ventricular septum, just over the muscular ring (limbus) surrounding the fossa ovalis, in the prismatic space formed by the separation of the muscular bundles of the right and left ventricle. The changes in these ganglia were as follows. The endothelium of the sheaths covering the nerve-cells was swollen in places; round elements resembling white blood-corpuscles could be observed in the interstitial tissue of the ganglia. The blood-vessels surrounding the ganglia, excepting the larger venous trunks, appeared for the most part empty. The protoplasm of the nerve-cells themselves seemed more or less clouded, and, as a result of this, their nuclei were nearly or quite invisible; in a few cells collections of finely granular pigment could be observed.

The most prominent and invariable change was this, that the nerve-cells did not fill the sheath entirely but left spaces between, through which only processes of the nerve-cells penetrated to the sheath. A similar appearance was observed by Lubimoff in the cervical ganglia of the sympathetic, in oedema, for instance in cardiac disease. In order to decide if oedema actually existed, Wassilieff measured the cells. The result showed an oedematous condition.

X.

PATHOLOGY OF HERPES ZOSTER.—O. Riesel (*Centralbl. f. Med.*, 1876, p. 649; from *Deutsche Med. Wochens.*) observed a case which he thinks tends to disprove Bärensprung's theory of the origin of zoster as a result of trophic nerve disturbance. After extirpation of the left mamma in a somewhat anæmic woman of

36, the left arm of the patient was laid upon a horse-hair cushion in such a manner that pressure was extended over the internal condyle. The next day pain was experienced on the volar side of the forearm, and the day following a great number of infiltrations, which became transformed into the efflorescence of herpes a few days later. The further course of the disease was normal. Riesel refers to the fact that the trauma affected almost exclusively the stem of one of the principal nerves, and this just after its passage through the fascia into the subcutaneous connective tissue, and that, as in Bohn's cases, a brief and trifling injury called forth the eruption. The author thus perceives analogies between this case and those of traumatic paralysis following pressure upon or bruising of motor nerves, particularly in the arm. According to Erb, the inflammation aroused in the neurilemma is transmitted along the course of the nerve, until it reaches its remotest twigs and even its distribution to the muscles. In a similar manner Riesel thinks herpes zoster due to some such inflammation carried from the seat of injury to that of the eruption in the line of the nerve. It is evident that trophic nerves would go for nothing in cases of this kind. Bärensprung's idea, that zoster might be aroused merely as a result of inflammation of the spinal ganglia, falls through when we reflect upon the infrequent occurrence of zoster in caries of the spine and carotid aneurism, although irritations of the cervical sympathetic and other ganglia were very apt to exist in these affections. x.

LINE OF CONDUCTION IN THE HUMAN BRAIN AND SPINAL CORD.—Hechsig, in a work bearing this title (*Abst. in Centralbl. f. Chir.*, No. 41, 1876), details the results of discoveries in the macro- and microscopic structure of the parts in question. It appears, under the first head, that the white substance of the central organ, which in the earlier stages of development, as is known, appears gray, acquires during foetal life the definitive white appearance which it subsequently presents, appearing successively in regular order in the various regions. The division into white and gray substance, which is apparent during adult life, first shows itself towards the fifth to sixth month of extra-uterine existence. Microscopic research shows that the system of fibres in the cord and medulla appears

and develops in a regular series; those endowed with the lower functions, as the reflex, appearing and becoming active at a much earlier period than those connected with consciousness, as the voluntary motor system. The occurrence of this method of development in the various systems of fibres affords the opportunity of studying the intimate relationships of the central lines of conduction more satisfactorily. The author, in consequence, feels himself in a position to demonstrate with more certainty than has hitherto been possible the arrangement of the various systems of filaments in the medulla and cord, and illustrates his discoveries by means of a colored scheme. It is thus seen, for instance, in what part of the cord those filaments are situated which proceed from the cerebrum, the cerebellum, and the reflexive portions of the medulla respectively. It is interesting to note the fact that the position in the spinal cord of these bundles of voluntary motor fibres, known as "pyramidal conductors," is by no means constant. They are as ordinarily situated in the posterior portion of the lateral columns of the cord, a few being situated in the anterior columns. Occasionally *all* are placed in the anterior or in the lateral columns. When the filaments pass down the anterior columns they are found to be connected with the hemisphere of the corresponding side; when they run down the lateral columns they decussate. This decussation takes place at the beginning of the spinal cord and medulla; it is very variable, being sometimes total, at other times a semi-decussation; occasionally it is altogether or almost entirely wanting. The modifications are innumerable. This discovery is important because proving that the arrangement of the individual filaments can vary more or less. The author makes it probable that not only the optic chiasm but also all crossings undergo individual variations. These anatomical discoveries explain the fact observed, *that injury to either hemisphere is followed by paralysis of the same side.*

The practical results of these discoveries is, that we can gain a deeper insight than formerly into the nature of certain diseases.

x.

THE Copley medal of the Royal Society has been awarded to Claude Bernard, for his physiological contributions.

PHILADELPHIA
MEDICAL TIMES.

PHILADELPHIA, DECEMBER 23, 1876.

EDITORIAL.

HOMŒOPATHY.

THE controversy at Ann Arbor has been so much discussed in almost every journal in the United States, that we feel like offering our readers an apology for even alluding to it. A very curious phase has, however, been developed, which seems worthy of notice, on account of its relations with most important questions in regard to the organized mass of ignorance, dishonesty, and half-truth honestly mistaken for whole truth, which makes up the modern homœopathy. The phase we allude to is the attacking of the Ann Arbor institution by the homœopaths themselves. On the table before us lies a circular addressed "To the homœopathic physicians and students of Michigan." It is a vigorous appeal by the President of the Detroit Homœopathic College for aid in obtaining the repeal of the law now in force in favor of a bill creating a separate, distinct, homœopathic medical college. So much of personal interest and feeling has been connected with the homœopathic controversy in Michigan that one naturally feels cautious in drawing conclusions. As "President" Spranger is at the head of a homœopathic school in a large city, it is plainly to be seen why he should prefer the endowment of a school in such a city to the maintenance of a department in Ann Arbor. The fact brought out by him, however, that there were only twenty-four homœopathic students last term is certainly true, and we hope his statement that "there is a prospect of still less the coming term" has proven a correct prophecy. If it should be, the days of the homœopathic department will probably be few and evil on the earth,

"for it will take three years to graduate students," and the yearly expense is \$6000. The Michigan tax-payer will probably be heard from, if he finds that \$18,000 has been spent for the luxury of two dozen homœopathic practitioners.

It is now many years since Oliver Wendell Holmes prophesied the speedy downfall of homœopathy. Yet the day has not come. We all know what homœopathy is,—that its system is half-truth mistaken for whole truth, that its members are, many of them, ignorant men, and many of them dishonest men, that its practice as modified in modern times is at defiance with its theory, and though often useful is on the whole much inferior to the practice of the better part of the regular profession. And yet the fact remains that homœopathy still exists, and, indeed, in this country commands a very large proportion of the best practice and much of the highest social influence. It does no good to meet this with talk about the credulity of the laity, of the existence of quackery since the world was, etc.

There was never such a systematic, all-pervading quackery before; and what is wanted is not excuses for its existence and not hopeless expressions of disbelief in the ability of the laity to understand the difference between the honest applier of modern science to the cure and prevention of disease and the charlatan, but some idea as to the best way of meeting the evil. The necessity of such discussion in this country becomes still more apparent when it is borne in mind that everywhere else in the civilized world the system is losing its hold, whilst here it still seems to be increasing its influence.

Unfortunately, the medical profession is scarcely yet in the frame of mind to bear such discussion. Any suggestion that one causative factor is the deficiencies of the regular profession, would probably lead to its author being called an Ishmaelite or some other sonorous title. Any proposition

which would involve contact with homœopaths would probably bring forth an endless quotation of the old proverb about touching pitch. We would, however, renewedly call attention to the fact that in Ontario, Canada, members of the regular profession and the homœopathic practitioners sit together in a joint governmental examining board without causing thereby any intermingling of the two currents, but with the very satisfactory result that almost no new homœopathic physicians appear, and the whole system is threatened with death by starvation. We have heard the contrary to this asserted publicly, but there can be no doubt of the fact. The leading Canadian journals have borne witness to it time and again, and diligent inquiry among the Canadian delegation here last summer confirmed it most fully. The efforts of the Canadian homœopaths to have the law abrogated betray present suffering or consciousness of future peril.

FOOT-BALL.

ON opening the last number of the *British Medical Journal*, our attention was at once attracted by the notice of a case of death from a kick in the side during a game of foot-ball. Reports of severe and even fatal injuries so received in England are, as our British colleague puts it, "sufficiently frequent" to have lost their novelty, and to have prevented our giving the subject more than a passing thought, had we not recently witnessed a portion of a savage game of foot-ball upon the University grounds, in which for the first time we saw in practice the so-called Rugby rules.

Properly played, foot-ball is a most commendable, healthy, invigorating game, into whose excitement any manly boy must plunge as naturally as the duck into water. As played by the old American rules, it is also an eminently safe game, endangering nothing more serious than the superficialities of the legs. But as played at Rugby it is,

after war and duelling, one of the most dangerous pastimes indulged in by civilized man. The difference consists simply in the circumstance that in the American game the ball is not touched with the hands except as a fair catch, when the catcher is allowed an unmolested kick, whilst in the Rugby game the great object is to seize the ball and carry it. Any violence appears to be allowable to prevent this,—a blow, kick, push, trip, wrestle,—anything. Again, when the ball nears home, some small and plucky boy will often throw himself on it, and instantly becomes the centre of a mass of reckless and infuriated boys, many of them much larger than himself, all kicking and fighting over him and the ball. The wonder is not that so many ribs are broken, so many viscera ruptured, so many boys crippled and killed, but that so many escape. Nothing but the proverbial tenacity of the boy's constitution and the flexibility of his osseous system saves him. We are very sorry to see the savage British game introduced here, just at the time, too, when the leading British medical journals are raising their voices in protest. Probably, however, the killing or maiming of a boy or two on such a public place as the University grounds will effectually arouse the feelings of American parents.

CORRESPONDENCE.

LONDON LETTER.

THE schools are now in full swing, and the winter session is an accomplished fact both for old students returning to the scenes of former labors, and for freshmen who are making their first acquaintance with the scalpel. The proportion of medical students at the different hospitals has occasioned some comment, especially in relation to King's College Hospital and Charing Cross, the entry at the latter school being greater than that of the more famous rival institutions. This is a fact for the authorities of King's College to ponder over, and is the outcome of the present system of management. Possibly the impression that Sir Wm. Fergusson would no more be seen in

his old wonted place in the operating theatre might have something to do with the falling off at King's College. To the great and unmixed satisfaction of the profession and the public, the famous baronet has returned from Scotland to his work, wonderfully restored to health, perhaps not with unimpaired vigor, but still much like his old self. Indeed, he bore his journey from the north so well that he at once resumed his social and professional duties in town. The entry at St. Bartholomew's is unprecedented, some one hundred and thirty-six new students having entered, a very great number for a London school. The entry at Westminster was the smallest of all.

The treatment of *psaos abscess* has up to a recent period been exceedingly unsatisfactory. It was equally dangerous to interfere surgically and to let the thing alone. After the introduction of the antiseptic treatment by Prof. Lister, it was shown that the perils of interference could be largely obviated by the adoption of the antiseptic plan. The most recent modification of this plan is that of Mr. Callender, viz., *hyperdistention with carbolized water*. Not only has this plan been tried by Mr. Callender, but others testify to its efficiency and the ease with which it may be carried out amidst the exigencies of ordinary practice. The operation may be performed under anæsthetics, or the integuments may be frozen by the ether-spray. The following are required: a scalpel for incision; a solution of carbolic acid (one in twenty) diluted to one in thirty by adding warm water when about to use it; a perforated drainage-tube; lint dipped in carbolized oil (one in twenty) for covering the incision; some gutta-percha tissue, to put over; a little adhesive plaster; some tenax to receive the subsequent discharge; and an ordinary syringe. This does not tax the armamentarium of the humblest practitioner. If continuous pressure on the sac be necessary, a bag filled with sand, or, better still, with shot, is very useful. The abscess should be emptied as completely as possible, then the nozzle of the syringe should be carefully inserted, and the contents passed into the abscess-sac. A finger in the opening will secure the fluid from escaping while the syringe is being refilled, and the amount of carbolized fluid required is rather more than the bulk of pus which escapes. By distending the sac efficiently the fluid gets into every corner and cranny of the abscess, and indeed into every burrowing sinus, so as to make the washing out quite perfect. When the distention is complete the fluid should be allowed to escape, and the drainage-tube inserted; over the tube and over the incision should be placed the oiled lint, and over it again the gutta-percha tissue and some tenax; the whole being secured by some adhesive plaster. The dressings are removed daily, and the drainage-tube shortened as the abscess contracts, and, if desirable, the sac may be washed out

from time to time with carbolized water. When there is no caries of vertebræ the whole closes up, but if there be also bone caries a sinus remains. This plan can be applied to other abscesses, and is especially suited to the irregularly-shaped abscesses of pyæmia. It is well adapted to the exigencies of rural practice, when the surgeon has only the help of some lay assistant, and where an elaborate apparatus is out of the question. A paper on the same subject was recently read before the Harveian Society by Mr. Edward Owen, in which he detailed two cases of *psaos abscess* very successfully treated on this plan.

Fracture of the spine is an accident but rarely followed by recovery; but a very singular and interesting case was related at the Pathological Society at its last meeting by Mr. Carr Jackson, surgeon to the Great Northern Railway Company. The subject of this accident was crushed by a horse-box falling on him twenty-six years ago. He was taken to the Royal Free Hospital, where it was found that motion was lost, but not sensation. The sphincters acted efficiently. After a month's residence in hospital the man improved so much that he went out on crutches and commenced to earn his living, which he has done up to the time of his death, a few months ago. Mr. Jackson kept a strict watch on him all these years, in order to secure the spine at last. The man used to enjoy life in his way: worked steadily, and got intoxicated occasionally, like his neighbors. At last the opportunity came, and by great exertions the coveted spine was secured. After a careful preparation, the amount of injury and repair is distinctly demonstrated. Two lumbar vertebræ had been extensively damaged, there having been both fracture and dislocation. There was intense pain at the time of the accident, but no contraction of any muscle or group of muscles followed. The man, however, retained an unsteady gait, which was not to be wondered at under the circumstances. A large mass of new bone had been thrown out by the damaged vertebræ, so as to solder the fractured pieces together. The union was strong and solid, but there was some twisting of the bodies of the vertebræ, which probably caused the modifications in the gait. Not only had the reparative process gone on from the periosteum of the fractured vertebræ, but spiculæ of bone were thrown out from the neighboring vertebræ above and below. The spinal canal was not much narrowed. There was also some injury to two cervical vertebræ, which were firmly united without any displacement. This injury was in all probability inflicted at the same time as the graver damage to the lumbar portion of the spine. The whole case is one of great rarity, and the result a very satisfactory one. The Society expressed its great satisfaction with the persevering way the case

had been followed from the date of the original injury to the time when the spinal column could be secured for scientific purposes. The preparation is now in the museum of the College of Surgeons, if any reader should be crossing the Atlantic and wish to inspect it for himself.

The Harveian Society opened with a paper on *Anhidrotics* by Dr. Milner Fothergill. He commenced by pointing out the anatomy and the functions of the sudoriparous glands, showing how increased vascularity of the skin and functional activity of these glands, though associated in health, as in the perspiration of violent exercise, are disassociated in some forms of disease. Thus, in rising fever the skin is burning and vascular, but dry and without perspiration. At other times, as in syncope or angina pectoris, where the skin is blanched and bloodless, there is free action of the sweat-glands, and the skin, especially of the face, is bedewed with sweat. Such activity with a blanched skin, from arterial anæmia, is rendered possible by the large plexus of capillaries at the root of each sweat-gland. Sweat is not mere water, but is highly charged with phosphates, chlorides, and sulphates, together with a fatty acid. It is acid normally, but when excessive becomes first neutral and then alkaline. At no time is any albumen found in sweat. The loss of these salts of the body by profuse perspiration renders hidrosis (hydrosis, Dunglison) most exhausting in conditions of debility, the condition of its main occurrence. It is of little use to feed up the patient when such a drain is going on; it is like pouring milk through a sieve. This is especially seen in the case of the consumptive, where the heavy night, or rather morning, sweats, are so often found. No treatment is effective which does not succeed in arresting the hidrosis. The best measures for checking the sweat are tonics with mineral acids, or astringents during the day, to improve the general health, and then some more specific measures at bedtime. Of these the sulphate of copper, sulphuric and phosphoric acids, the oxides of silver and zinc, especially the latter, are those in common use. More recently certain members of the Solanaceæ have been used for this purpose, and chiefly belladonna and hyoscyamus. Hyoscyamus is rarely given alone, and is generally given with the oxide of zinc in pill. Such combination is very effective in many cases. Belladonna is the most potent agent, however, and Dr. Fothergill has the opportunity of giving it a very extensive trial at the Victoria Park Chest Hospital, to which he is attached. In the very hot week, July 16 to 23, of this year, he had seventy-four (out of a total of three hundred out-patients) taking this drug. With scarcely an exception they were all phthisical, chiefly in the early stages. The arrest of the sweating is usually brought about by a dose of one seventy-fifth of a grain of

atropine, or twenty drops of the tincture of belladonna, at bedtime. It takes a dose or two before the effect is brought about, and the effects continue two or three days after the drug is discontinued. In other cases it is necessary to push the medicine to the fiftieth, or even the twenty-fifth, of a grain of atropine. It would seem that some patients are much more tolerant of belladonna than others, and with them the larger doses may be given without toxic symptoms being induced. Where the smaller doses are insufficient the higher ones must be administered. In some cases dryness of the throat or indistinctness of vision, especially when getting out of bed in the morning, are complained of, but there is no difficulty in getting the patients to continue the drug, as they find it relieves them of their exhausting sweats. In those cases where the largest dose given here fails, then it is well to give the oxide of zinc and hyoscyamus in pill, as apparently there is a great tolerance of belladonna in such cases. As soon as the sweats are checked the patient begins to pick up, the appetite improves, and the digestion becomes more vigorous; the drain of salts by the sweat being arrested, these salts so retained in the body aid materially in procuring good assimilation. Of course the effects of anhidrotics are better seen in the earlier than in the latter stages of phthisis. When the lung is breaking down extensively, and the patient is the subject of persisting colliquative sweats, then the results are but palliative, though it may be found that larger doses than those hitherto given may be more effective even in these cases.

At the Medico-Chirurgical Society Sir James Paget described a form of change in bones to which he gave the name of *osteitis deformans*, thinking it to be a form of chronic inflammation. It is of slow growth, and commences in middle age or advanced life. Except for the pains to which it gives rise, it has no ill effect upon the general health, and the chief complaint arises from the inconvenience suffered from the shape, size, and direction of the afflicted bones. In some cases the skull is attacked, and, though its weight is greatly increased thereby, there are no mental disturbances occasioned by its presence. The spine, whether overweighted by the overgrown skull or diseased itself, is apt to sink and be shortened by an increase in its natural curves. While the body is thus shortened, the pelvis is made broader by the changes in the necks of the thigh-bones, which become nearly horizontal. The long bones of the lower extremities are very commonly implicated, and become curved and misshapen from the weight they sustain. Nevertheless they remain strong and useful. The pains occasioned by this malady are generally described as gouty or rheumatic, but they are neither nocturnal nor periodical. Such patients do not furnish the opportunity of seeing the progress of the

earlier stages, but it seems probable that there is an inflammatory action of a very chronic character going on with some softening, and the production in considerable quantities of imperfectly developed structures and accompanied by an increased blood-supply. It was doubtful whether this slow inflammatory process continued to the last, or whether it ceased and was followed by a consecutive hardening of the new growths. This paper gave rise to an interesting discussion. Mr. Barnwell thought that what was gained in size was not accompanied by corresponding increase in weight, so that in reality the change was rather an osteo-porosis than an osteitis deformans. Sir Wm. Gull remarked on the curious choice of situation selected by it. It would affect the hyoid bone and leave the phalanges free. It also did not seem certain whether it was symmetrical or not. Sir James Paget, in replying, pointed out that it differed from chronic rheumatic arthritis, so admirably described by the late R. Adams of Dublin, in the fact that the shafts of the long bones were affected; no mention of this change having been made by Mr. Adams in his exhaustive memoir.

Amidst the other uses of chloral is that of its external application. It is found to relieve pain, and also to act as a detergent and to arrest hemorrhage. Such use of it has been extensive by Dr. Dowse, the Superintendent of the Highgate Infirmary. He has found it useful as an application to recent flaps after amputation. By such application there is not only relief from local pain afforded, but the unpleasant sensations felt in the extremities of the lost limbs, as in the toes for instance after amputation of leg, have also been avoided. When injected betwixt the flaps, it relieves the reflex startings so commonly present. The use of chloral as an external application to sores, etc., took its origin, with Dr. Dowse at least, in a sort of despair as to what to do in a case of fungus hæmatodes of the mamma. All sorts of disinfectants had been applied without satisfactory results, so chloral was tried, with such good effects that further trial of it was made. A few cases briefly stated will illustrate its action. When applied to a large cancerous sore on the top of the head, it not only relieved the pain, but the discharge, previously most offensive, was greatly improved and rendered less offensive. In a case of cancerous ulceration of the os uteri, in combination with chloride of zinc great relief was experienced. An impetiginoid eczema of the face, which was obstinate and painful, yielded to a solution of chloral and glycerin. The relief from pain was complete, and in a few days the surface began to clean and healed rapidly. In a case of osteo-arthritis, where the pain was very intense in the knees, which were so tender that the least touch was intolerable, flannels wrung out of a hot solution of chloral gave the greatest relief. In a few days

the pain and swelling had subsided, the joints could be manipulated, and in a week all active signs and symptoms had disappeared. In a paraplegic patient most agonizing abdominal pains were experienced, which usually went off in attacks of diarrhoea. The internal administration of chloral and morphia failing to afford relief, a blister was placed in the epigastric region, and the sore dressed with chloral. The results were such as to astonish the patient. Similar treatment was most effective in a case of pleurodynia, where other measures had failed. In an axillary abscess, the local application of chloral led to great relief. The four solutions used by Dr. Dowse are as follows: 1. Chloral Ziv , water Oj . 2. Chloral Ziv , glycerin Zi , water Oj . 3. Chloral Ziv , solution of chlorinated zinc Ziv , water Zxxvi . 4. Chloral Ziv , solution of perchloride of iron Zii , water Zxxvi . "The application of these solutions to raw surfaces requires some care in manipulation. Folds of lint just the size of the part must be saturated with the solution, and brought into close contact with it; then three or four layers of lint wrung out of hot water placed upon them, and over all a piece of oiled silk."

At the Obstetrical Society the most interesting subject has been that of a successful case of operation for extra-uterine foetation. The operation was performed by a rising provincial surgeon, Mr. Jessop, of Leeds. It is very rarely that such an operation is successful. The details are scarcely of general interest, but those who are desirous of seeing them will find them in the *Lancet* of November.

The health of London is very satisfactory on the whole, and there is comparatively little zymotic disease about at present, except smallpox, which is becoming rather active again, especially among the unvaccinated. It is an awkward fact for the agitators against this useful measure that, although the unvaccinated are but such a small proportion of the community at large, of the recent admissions to the smallpox hospital the number of vaccinated and unvaccinated are about equal. This is a sufficient argument in itself to demonstrate how great is the liability of the unvaccinated to take smallpox when the opportunity offers itself. Nevertheless, the agitation goes on, and has received an unfortunate stimulus in the death of two children from pyæmia after vaccination, at Liverpool. I think the agitation has its head-quarters amidst the population of the crowded manufacturing areas of Lancashire and Yorkshire. The Keighley guardians who were recently confined in York Castle for not enforcing the vaccination act have returned to their families, and were received by a large crowd with a band of music, who escorted them from the station to a public meeting, where their sufferings for the cause met with much sympathy. The mischievous agitation is leading to all sorts of manœuvres. After the announcement

of a birth in the *Times* and other leading papers, the father usually receives a card or circular detailing in inflated language the horrible dangers which beset the little operation of vaccination. Of course the agitators make the most of any case occurring after vaccination, forgetting that smallpox may recur in the same person, and that one attack is not always a certain protection against a second. Only the other day I remarked to a hospital patient how severely she had been handled by the smallpox, when she informed me that she had had it twice, and that it was the second attack which had disfigured her so; adding, "it was because I had not been vaccinated," exhibiting a faith which no doubt would excite the derision of the north-country agitators. Of the way in which this fearful disease is spread a striking instance occurred lately. A woman was fined the other day for having a child ill with smallpox, and, instead of having him removed, she had him covered with wadding which she had in the house for the purpose of lining mantels. This means of securing the spread of the disease reminds one of the death of the bridegroom in the finishing scenes of "Alton Locke," in consequence of typhus poison in his coat, fresh from the tailor's house, where typhus was rife.

Very trifling operations sometimes are followed by most unpleasant consequences. I have just mentioned that in two cases lately, death followed vaccination, apparently from pyæmia. A case of death following a hypodermic injection is just recorded. A lady who had fallen into the habit of injecting morphine to relieve sickness to which she was very liable, was seized with tetanus and died. It transpired that she was scarred with marks of old injections, as well as bearing marks of recent origin; and in a wardrobe were found a number of phials of solution of morphine, an injection-syringe, and several rusty steel needles. The use of the latter led to the unfortunate consequences. This case teaches another lesson, viz., the spreading habit of secretly resorting to the hypodermic use of morphia,—the most dangerous of all forms of narcotic indulgence.

The growth of the resort to narcotic agents, now so universal, will furnish a grim chapter for some writer in the future. It will be found not that persons are more self-indulgent now than ever before, but that the tax upon the nervous system entailed by modern exigencies is such that it is impossible to maintain the strain without resort to some form of narcotic. One takes chloral nightly, another uses injections of morphia, a third indulges in tea, a fourth takes alcohol too freely, a fifth is given to large draughts of genuine wine, while a sixth goes in for Easton's syrup, and a seventh resorts to digitalis and iron as a species of dram. This craving for narcotic agents is indicative of the taxation of the nervous sys-

tem in the present day. Those who are specially interested in this system and its maladies will hail with satisfaction the appearance of Prof. Ferrier's work on "The Functions of the Brain." It is a handsome little volume of some three hundred pages. It commences with the structure of the brain and cord; the functions of the cord, the medullary and the other portions of the central nervous system. The phenomena excited by electrical irritation of the cerebral hemispheres form a chapter by themselves; and for many readers this chapter will have the greatest attractions. It contains many excellent plates of the brains of monkeys and other animals experimented upon; and numbers are used to indicate certain spots to which reference is made in the text. These are also very useful for the purpose of comparison betwixt different brains; and the whole chapter clears up very satisfactorily the localization of function in certain parts: some being devoted to motor purposes, while other localities are connected with the special senses. The hemispheres are considered physiologically in one chapter, and psychologically in another. The last chapter will excite the curiosity of many readers, who will be desirous of knowing what the learned professor has to say, on the subjects of the emotions, the growth of volition, motor memory, and the control of ideation. Dr. Ferrier has the capacity to say in definite language what he means, and his style is clear and lucid, being also considerably more classical than that of the bulk of writers of the present day. However, ne sutor ultra crepidam, and the correspondent must not trench upon the editor's ground, and start writing a review. This much may, however, be said, that the perusal of the work will make many readers impatient to see the treatise on the Diseases of the Brain, which will follow the present work in the course of time.

PROCEEDINGS OF SOCIETIES.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

THURSDAY EVENING, OCTOBER 26, 1876.

The PRESIDENT, DR. H. LENOX HODGE, in the chair.

DR. JOHN ASHHURST, Jr., presented the specimens and read the report of "Cases of Compound Fracture of the Skull occurring in Children, with remarks." (See original communication in current number of the *Times*.)

Dr. WM. PEPPER said, in connection with the second case, he desired to put on record a case which he had recently seen in consultation with Drs. Stewart and A. H. Smith of this city. The absence of any complete previous history diminishes the interest of the

case, while as bearing upon the diagnosis it possesses considerable interest. The patient was a government contractor, about thirty years of age, a native of Illinois, but was in this city on business. He first complained of violent neuralgia over the left eye, for which he consulted Dr. Stewart, who gave him large doses of morphia and quinia, with temporary relief. A few days later pain returned, and soon after he had a convulsion, which was followed by a state of great nervous excitement. This was gradually replaced by dullness and deepening stupor. It was nearly forty-eight hours after the attack when Dr. Pepper saw him for the first time. His pulse was then regular, but there was paralysis of the right arm and leg, and partially of the right side of the face; there was no paralysis of the eyelids, but the patient was completely aphasic, while he could be made to understand by the use of signs. His pulse kept falling, he had one or two more general convulsions, but after this no more severe ones, although there were slight convulsive movements limited to the right side of the body. Towards the close there were also frequent attacks of convulsive movements of the muscles of the face, presenting themselves chiefly in the shape of quick twitchings of the muscles about the mouth on the right side, and perhaps on the left slightly. Later followed deepening stupor terminating in unconsciousness, continued dropping of the pulse until it fell to 65, 60, and 48, remaining regular; retraction of the head, inability to swallow, and loss of power over the rectum.

The treatment was based on the supposition that there was a syphilitic tumor pressing upon the under surface of the anterior lobe of the left hemisphere. There were, however, no other signs of constitutional syphilis; vision and hearing were unimpaired, he had good teeth, there were no scars or loss of substance of the nose, no enlarged glands, no mark of secondary eruption or periostitis of the superficial bones. Still, as there was no previous history obtainable, and no evidence of injury to the skull, the diagnosis of tumor was made. At the *post-mortem* examination an old encysted abscess was found between the dura mater and the surface of the brain over the left frontal bone, extending under the surface of the left hemisphere, and producing a strongly marked depression of the fissure of Sylvius and adjacent parts. The membranes were thickened and dense. There was no lesion of the brain-substance between them, but a slight softening of the most superficial layers of the cineritious substance. The cavity contained five or six ounces of fetid pus, but there was no injury to the bones of the skull. The track of the left meningeal artery was seen to be the seat of caries, so that when compared with the track of the artery on the opposite side, it was found to be three or four times as large and with a porous surface of bone.

It was subsequently learned from the family that he had been living away from home, and nothing was known with regard to any accident which may have occurred to him.

Large doses of iodide and bromide of potassium diminished the severity of the convulsions, but the case ultimately terminated as above.

Extra-uterine pregnancy. By Dr. WILLIAM PEPPER.

Margaret M., æt. 53, married, nativity Ireland; has been in this country for twenty-seven years, and has been married twenty-four years. One year after her marriage she ceased menstruating, and noticed that her abdomen began to enlarge. She then told her friends that she was pregnant. But as time passed on to about (as she thought) five weeks before her time of being confined, she noticed that her abdomen began to grow less, and her friends wondered why she was not confined. During the three years following this time, she had two miscarriages, but I was unable to find out at which month of gestation they occurred. She then had two living children; the one died three days after it was delivered, and the other is still living. After these living children were born, she had two more miscarriages, and the last one occurred about thirteen years ago. During all this time her health was comparatively good. About eighteen months ago she was admitted to the surgical wards of the Philadelphia Hospital with necrosis of the bones of the right foot. She remained in the surgical wards for eight months, and was then discharged to the out-wards. She remained in the out-wards until October 11, 1876, at which time she was transferred to Dr. Pepper's on the medical floor. The woman was very weak and had intractable diarrhœa, with which she rapidly sank, and died on October 13, 1876.

Post-mortem examination was made twelve hours after death, and the following conditions were found:

No rigor mortis; body not well nourished; the lungs and heart were quite healthy; the liver was slightly fatty; spleen normal in size; kidneys were fatty and somewhat contracted; the intestines were slightly congested, and lying over the superior strait of the pelvis was a hard tumor, which was quite movable, and was only attached to the omentum and to the right Fallopian tube; ovaries and uterus were quite normal.

She was living with her husband until eighteen months ago, when they were both admitted to the hospital.

The specimen was referred to a special committee consisting of Drs. F. P. Henry, J. E. Mears, C. B. Nancrede, Morris Longstreth, and E. O. Shakespeare, for examination and report.

Dr. HODGE asked Dr. Pepper whether there had been at any time simulated labor.

Dr. PEPPER could not answer; he only knew that labor was looked for, but did not come on.

Dr. HODGE said that at about nine months there is generally a simulated labor, even in cases of abdominal pregnancy. So that if there was none in this case it belongs to a class of very rare cases.

Extensive disease (syphilitic) of pericardium, pleura, and peritoneum; paracentesis of chest and abdomen. By Dr. WM. PEPPER.

James Murray, æt. 26, single; nativity, Philadelphia; occupation, huckster. Admitted August 29, 1876, to Philadelphia Hospital. Family history good. He stated that he had been a healthy man until five years ago, when he contracted a multiple chancre, which was followed by buboes, and five months after by an eruption, which has resisted treatment obstinately. He had been a drinking man, and in the habit of drinking large quantities of undiluted liquors early in the morning before taking any food.

About the first of last May he noticed a slight yellowness of the skin, and his abdomen enlarging; he also noticed that the quantity of the urine was less than natural. Since then his health had been failing fast, and his belly had greatly enlarged, until it measured forty-three inches at the umbilicus; also great œdema of the lower extremities and of the lower parts of the belly walls. Tongue was slightly coated, and some symptoms of indigestion and some diarrhœa. He passed twenty-eight and a half ounces of urine daily, which was of a very high color, but did not contain any albumen. On September 10 he was suffering extremely from overdistention of the abdomen. In addition, it was found that an effusion was occurring in the left pleural sac. The heart was pushed towards the right, apparently; but it was impossible to detect any apex-beat, and the cardiac sounds were very feeble and distant. In addition to this, dulness extended farther to the right of the lower part of the sternum than seemed explicable merely by displacement of a healthy heart. Paracentesis was performed through linea alba, and twenty-three and a half pints of light straw-colored fluid were drawn off, with immediate relief. On September 29 the effusion in the left chest had increased, so as to cause great distress. By means of an aspirator eight and a half pints of amber-colored fluid were drawn off. This was followed by great relief; but the heart did not return to its normal position, nor did its sounds or apex-beat become more distinct. The left lung expanded very imperfectly, and it became evident that, with the exception of the upper lobe, there was great thickening of the pleura over this lung. On October 4 the patient's distress was again extreme, and colliquative diarrhœa had set in. The dulness over the left lung now had attained its former proportions, and paracentesis was again per-

formed, but only succeeded in drawing off eighteen fluidounces. The abdomen was tapped a second time, and five and a half pints of fluid were drawn off. The patient was somewhat relieved, but slowly sank, and died October 22.

Autopsy.—Brain not examined.

Right lung presented some thickening of pleura, with adhesions in points. On left side both layers of pleura were enormously thickened and matted together, so as to form a layer nearly one-half inch thick. The pleural sac was thus obliterated, with the exception of two cavities in the substance of the thickened pleura. One of these, in the side, was capable of holding a pint, was lined with shreddy lymph, and was evidently the point from which the last accumulation of fluid had been drawn off. The other was small, with capacity about two fluidounces, and was seated on the posterior surface of the lung. The left lung was compressed, but free from organic disease.

The pericardial sac was obliterated and the membrane enormously thickened. There had evidently been old pericarditis. The cardiac layer was encrusted with calcareous matter. Then came layers of organized lymph, and then the much thickened parietal layer. The left lung was closely adherent to the outer side of the pericardial sac.

The liver was fatty and cirrhotic. There was old peri-hepatitis, affecting not only the convexity, which was covered with layers of false membrane, but the concavity, and especially the region about the transverse fissure, where dense thickening of the capsule and cellular tissue had occurred. It could not, however, be found that any actual compression of vena cava had resulted. The walls of the gall-bladder were white, dense, and fibrous.

The spleen was enlarged, its tissue firm; trabeculae enlarged. Capsule presented marked localized peritonitis. The kidneys were in a state of albuminoid degeneration.

Dissecting aneurism of the abdominal aorta.

By Dr. W. H. EDWARDS, for Dr. EDWARD R. STONE.

C. W. K., æt. 46 years; German. He had been for many years a bar-tender, but when my acquaintance with him began he was engaged as a collector for a clothing-store in the city. He had been in the habit of drinking moderately of wine and beer, but rarely sufficient to intoxicate him. He had never had syphilis, and his previous health had been excellent. I saw him for the first time in May, 1875, when he told me that he had been suffering for some weeks (he did not remember how many) with pain in the left hypochondriac region. The character of the pain was usually dull, but sometimes it became sharp and stinging. There was also at times pain in the back at the lower dorsal vertebrae. His appetite was rather variable, with occasional dyspeptic symptoms, but no vomiting

or pain in the region of the stomach. Bowels regular.

Examination showed a very tall and quite muscular man, rather slender, but apparently in fair condition. Lungs healthy; heart-sounds natural, excepting that they were somewhat indistinct; splenic dulness normal; liver not enlarged.

After visiting him twice he passed out of my hands until the following November, when he told me that he had not had any relief from the pain, which had grown so severe that he was no longer able to attend to his business, as the walking aggravated the pain in his side, and the jar of riding in a carriage or car was even worse. He had become much thinner and ill-looking, and his appetite and digestion were somewhat impaired. The pain still occupied about the same situation, but had spread itself out to occupy nearly the whole space between the nipple and lower border of the ribs, sometimes being felt in the epigastric region. Repeated examinations by myself and others failed to find evidence of a tumor or other organic disease in any of the organs; the urine was several times examined for albumen, with negative results. Dr. S. H. Griffith made a microscopical examination of the blood, to determine the relative quantity of corpuscles. The red were moderately diminished in number, but without any real increase of white cells. It would be tedious to go into the details of the case during the several months he was under my care. It will be sufficient to say that he steadily lost ground, becoming gradually weaker and more emaciated. The pain became more continuous and severe, requiring the constant use of the hypodermic syringe.

Early in the summer of 1876 he gained admittance into one of our hospitals, and only returned home two weeks before his death. During his stay in the hospital he had rapidly failed. Emaciation was extreme, with commencing bed-sores on trochanter and sacrum. A large tumor was now very evident, extending from the epigastrium to the umbilicus, the dulness of which was continuous with that of the liver and the spleen. He had occasional vomiting, and his stomach had great difficulty in digesting even the simplest diet. On palpation the tumor seemed in part solid; at other points fluctuating. On ausculting over the mass a splashing sound was heard, synchronous with the pulsation of the aorta. He died quietly on October 20.

Post-mortem examination, thirty hours after death. Chest and abdomen only examined. Pleuræ, a few old adhesions on both sides; slight effusion of clear serum in the left cavity. Lungs healthy. Pericardium normal. Heart rather small; ventricles contracted, but otherwise healthy. On opening the abdomen a large tumor was seen, corresponding with the swelling noticed during life. The stomach was much enlarged, and was stretched over

the mass which had grown up behind it. Its walls appeared healthy. Mucous membrane softened by post-mortem decomposition.

The pancreas was spread out on the upper surface of the tumor, and at first sight appeared enlarged, but on closer examination was found to have been merely flattened out by pressure. Its tissue was healthy.

The liver was in contact with the right side of the mass, but had no connection with it. It showed two or three wedge-shaped spots on its surface, looking like infarctions. The cells appeared healthy, but the whole organ was congested.

The spleen was also in contact with the growth, but was not involved. It was healthy, excepting slight congestion.

The transverse colon was attached by the fold of peritoneum to the lower part of the tumor, and was put on the stretch by the large size of the latter.

The kidneys were congested, but did not appear otherwise unhealthy.

The tumor itself well filled the upper part of the belly. It was covered with peritoneum, which had apparently been pushed forward from the back part of the abdominal cavity. It was directly upon the great vessels of the abdomen. The tumor was felt to contain cysts, and two of these, very near the surface, were ruptured in removal, one containing clotted blood, the other a fluid having the appearance of pus. It was reserved entire for examination, and with it a fragment of liver and a kidney.

The specimen was referred to the Committee on Morbid Growths, which reported, November 9, 1876, as follows:

The abdominal tumor is found to be a dissecting aneurism filled with firmly-organized blood-clots. The portion of the abdominal aorta remaining attached to specimen is highly atheromatous, and apparently eroded at one or more points.

Dr. C. B. NANCREDE asked what method had been used to determine the fact stated, that the number of red blood-corpuscles was diminished.

Dr. E. R. STONE said the corpuscles were counted by Dr. Griffiths according to the method recently recommended by Dr. E. L. Keyes in the *American Journal of the Medical Sciences* for January, 1876, slightly modified by Dr. Griffiths, and thus described by him:

"The diluting fluid was that used by Dr. Keyes—urine; to each ounce of which was added gr. v of corrosive sublimate, and the mixture then reduced to a specific gravity of 1020. The dilution of the blood was 1 to 250. Not being at that time the possessor of Hayem & Nachet's hæmatimeter, I had Mr. Zentmayer make for me a cell .01 inch deep. Taking .01 inch square of the field, I had a cube of the diluted blood .01 inch in each direction. I observed the precaution not to

allow the fluid to reach the edge of the cell, securing the cover and preventing evaporation by introducing under the cover some water.

"Using this, I made a number of counts; the average being in my own case 426 red globules; in the case of Dr. S. 425. In the case of the patient the average of six counts was 313. These numbers were not large enough to determine anything about the white corpuscles, except that they were not markedly increased relatively to the red.

"Therefore I considered the case was one of marked reduction of the number of red globules, and probably also of the white in the same proportion.

"I should add that my dilution may not have been accurately 1 to 250, but what it was for one count it was for all, so that the comparison remained good."

Cancer of the vagina, fibroid tumors of the uterus, and secondary cancer of the lungs and liver. By Dr. W. H. WARDER.

H. C., colored, aged 50, occupation domestic; entered the Philadelphia Hospital October 19, 1875. She had never had any children. She always suffered more or less pain at the menstrual period, and for the last five or six years the dysmenorrhœa had greatly increased, and was attended by menorrhagia.

Two years before entering the hospital she noticed a hard lump in the lower portion of the abdomen, which she attributed to a strain from lifting a heavy tub of clothes. From this time she had suffered with more or less pain in the pelvic region, irritability of the bladder, constipation or diarrhœa. At the time of entering the hospital there was more or less discharge from the vagina of a thin, watery character, irritating the external parts and somewhat offensive. Up to this time there had been no metrorrhagia.

Soon after this she said her sickness became very irregular, and she hardly knew when she was unwell. Six months after she entered the hospital the case came under my observation. Upon a careful physical examination, I found the vagina greatly contracted and full of soft granular masses of a papillary character, and bleeding freely upon the passage of the finger to the cervix uteri. The cervix could be easily detected, and was movable and but slightly hardened. By bimanual palpation I found the uterus very much enlarged, with nodular masses upon its external surface. By simple palpation I could easily detect the tumor above the superior strait, reaching a point almost midway between the umbilicus and the symphysis pubis. The tumor was movable in the abdominal cavity.

The woman was comparatively well nourished, but complained of general debility and loss of appetite.

Up to this time there had been no very severe hemorrhage. She did not complain

of any special pain in the thorax or in the region of the liver. There was no difficulty in respiration, and the heart's action was normal. I diagnosed the case at the time as epithelioma of the vagina and fibroid tumors of the uterus.

During the last six months, the case has not been under my observation. Dr. Moffet, resident physician, Philadelphia Hospital, very kindly furnished me the following notes of the case during that time. "Has complained of a good deal of pain of sharp lancinating or burning character in the lower portion of the pelvis. More or less hemorrhage, and offensive discharge. During the last two months complained of great difficulty in respiration, with all the symptoms of œdema of the lungs. A weak, small, and irregular pulse. The difficult respiration was greatly relieved by doses of 10 gr. carb. ammon. and 15 drops tincture digitalis. There was no special pain in the region of the liver. She died October 1, 1876."

Post-mortem examination. Lungs filled with secondary cancerous deposits; spleen normal; the liver contained brain-like deposits very generally through it; kidneys normal; uterus showed sub-serous, interstitial, and sub-mucous fibroids; one large tumor attached to the fundus externally had a cystic character; vagina very much contracted, the walls hard and indurated, filled with papillary growths of a jelly-like consistence. These extended up to the cervix uteri, slightly involving the same; bladder normal; rectum normal.

The specimen was referred to the Committee on Morbid Growths, which reported, November 9, 1876, as follows:

"Your Committee have examined the tumors presented by Dr. Warder, and beg leave to report that the growth upon and in the walls of the vagina is *carcinoma gelatinosa*. At only a few points can any remains of the cells undergoing colloid degeneration be found."

Dr. J. EWING MEARS said with regard to the occurrence of primary cancer of the vagina, although rare, two cases had been presented to this Society within a comparatively short period of time, in each of which an operation was performed, one by Dr. Parry and another by himself. In both cases the uterus was not involved. Dr. M. also thought that probably primary cancer of the vagina would not be found so rare could the cases involving vagina and uterus be sufficiently early examined,—that is, before the disease had extended to the uterus, which may not always be the place of beginning in these cases.

Dr. ASHHURST said that primary cancer of the vagina was undoubtedly a rare affection. He had himself seen but one case, in a patient supposed to be suffering from hernia, but who, on examination, was found to have cancer of the vagina, with secondary implication of an inguinal lymphatic gland. Vaginal cancer

spreading either upwards from the vulva or downwards from the uterus was, however, comparatively common.

Dr. WARDER said that at the first examination there was no involvement of the vulva, and he did not come in contact with the mass in the vagina until the orifice had been passed half an inch. The diagnosis was made from the general characters rather than a minute examination, among which was the peculiar smell; for, although an examination of the papillary growth was made by the resident physician, nothing characteristic was discovered.

Tumor of neck. Dr. LOUIS STARR, for Dr. B. J. RUDDEROW. Operation by Dr. W. P. JANNEY.

M. S., æt. 21, single, having a healthy family history, first noticed the growth, which she attributed to an injury received while playing with some of her companions, seven years ago. It was then about the size of a small hickory-nut, painless, slightly movable, and hard. In this condition it remained until last March, when it commenced to grow with great rapidity. Four months later she began to feel sharp, shooting pains through the tumor. From the middle of September to the day of the operation, October 19, 1876, the patient had a chill followed by fever every day; there were, however, symptoms of phthisis present. Before the operation the following observations were made: tumor superficially seated on left side of the neck, in a space bounded in front by the sternocleidomastoid muscle, below by the clavicle and spine of the scapula, and behind by the cervical vertebræ; it is nodulated, movable, and at its lower edge there is a bright spot of inflammation about the size of a silver dollar; there is no enlargement of the neighboring glands. After the patient was well under the influence of ether, a simple elliptical incision was made and the mass torn from its bed. The edges of the wound were then brought together and a dry dressing applied. Since the operation there has been no return of the hectic fever, and the patient has done well in every respect.

The specimen was referred to the Committee on Morbid Growths, which reported, November 9, 1876:

"The tumor presented by Dr. Starr as removed from the neck is a simple lipoma, presenting at some points considerable small-celled infiltration of the connective tissue."

Elephantiasis of the penis. Presented by Dr. E. O. SHAKESPEARE, for Dr. F. DUFFY, of New-Berne, N.C.

The patient first placed himself under treatment of Dr. Duffy some time last January. At that time he was apparently in robust health. He could give no history of inherited vice of any kind, and previous to the present attack never had a disease or an injury of the genitals. Two weeks anterior to the first

consultation of Dr. D., the penis had become erect, and had so remained without interval of relaxation up to date of visit. At that date the organ was of average size, and exhibited no symptom of disease other than the previously mentioned persistent erection. It may be remarked here that while the penis was not at this or at any subsequent period painful, yet it was then, and continued to be, in such a hyperæsthetic condition that considerable care had to be observed lest it were suddenly jarred or moved. Two weeks later the patient was again seen; meanwhile the organ had grown rapidly, the erection being constant. Half-way between the corona glandis and symphysis pubis the circumference measured seven inches. At this point the circumference was slightly greater than anywhere else, the penis now having a slightly perceptible spindle form. After this the organ rapidly increased in volume, growing equally in all its parts. The skin soon became so distended and tense that, in order to avoid rupture, a lateral longitudinal incision was made on each side. Despite everything that was done for the relief of the unfortunate man, the member continued to grow at such a prodigious rate that at the end of March the circumference had reached twelve inches. Amputation was then advised and consented to. The penis was removed without trouble by the loop of the galvano-cautery applied as closely as possible to the pubis. The stump healed kindly. It should be particularly noticed that, concurrent with the growth of the penis, the glands in the right inguinal region became gradually enlarged from the size of a pigeon's egg, when the patient was first seen, to the dimensions of the two fists when the penis was removed. The patient had not noticed any glandular swelling prior to the erection. During all this time the body temperature was normal, except possibly towards the end. The patient became very despondent, losing appetite and flesh. An intercurrent attack of pleuritis occurred a little before the amputation, but it was so slight that it would have escaped notice entirely, but for the physical signs detected during an examination of the thorax. No glandular enlargement could at any time be discovered anywhere else than in the location above indicated. Soon after the amputation, the glandular swelling began to disappear. Owing to a protracted illness of Dr. Duffy which occurred at this time, the patient was lost sight of for several months. When next seen he was rapidly sinking, apparently from mere inanition and anæmia. The glandular enlargement had entirely disappeared, and no metastatic deposit could anywhere be seen, or inferred from symptoms which the patient now presented. The man soon died, but, unfortunately, no autopsy could be obtained. It is believed that this man had been suffering with elephantiasis of the penis. The

points of greatest interest connected with the case are probably the enormous size of the organ, the rapid development of this size, the concurrent swelling of the inguinal glands, the complete dissipation of this swelling between the time of amputation and death, and death by exhaustion without indication of secondary deposits.

Dr. ASHURST said that although glandular enlargement was not a very frequent accompaniment of elephantiasis Arabum, it was occasionally met with. The older members of the Society would remember the specimens of enormously enlarged cervical and bronchial glands (the latter the immediate cause of death) presented by him in 1864. (See Proceedings, vol. ii. p. 155.)

In this case several broad patches on the body closely resembled Arabian elephantiasis, and were considered to be of that nature.

Dr. R. M. BERTOLET asked whether there were any secondary deposits as determined by post-mortem examination.

Dr. DUFFY said glandular enlargement had existed in the groin on the right side before incision was made, but subsequently this disappeared, and there was none anywhere in the body.

The specimen was referred to the Committee on Morbid Growths, which reported as follows, December 14:

"An examination of the penis referred to the Committee upon Morbid Growths shows microscopically an increase in the size of the papilla of the cutis; the layer of epithelial cells covering the same is much thickened. A transverse cut of the vessels presents their lumina much diminished in size, while the connective tissue surrounding them is found increased. No nerves were seen in the section. The hyperplasia depends upon a hypertrophy of the connective tissue in the organ, which tissue is observed as fibres running in every possible direction. This peculiar arrangement of structure would determine the disease to be 'elephantiasis Arabum.'"

REVIEWS AND BOOK NOTICES.

ON TRACHEOTOMY, ESPECIALLY IN RELATION TO DISEASES OF THE LARYNX AND TRACHEA. By W. PUGIN THORNTON, Surgeon to the Hospital for Diseases of the Throat, and to the St. Marylebone General Dispensary. Pp. 70. (Philadelphia reprint.) Lindsay & Blakiston.

This little manual deals with the matter included within the subject title in a systematic manner: first treating of the anatomy of the parts, then of the operation, the dangers attending its performance and the after-treatment, the diseases and injuries requiring tracheotomy, and finally of the operation in

other diseases, chiefly those inducing dyspnoea by external pressure or paralysis. The book is illustrated with eighteen wood-cuts and three photographs, the latter being views of pathological specimens. While little new is added to the operation, the book is made interesting by the narration of twelve cases new to medical records, most of which have occurred in the author's experience. The literature is not neglected, however, many references being made to papers and cases bearing upon the subject. We are pleased to see Drs. Wm. Hunt and Cohen mentioned in this connection.

An occasional evidence of carelessness in the make-up is to be regretted. Thus, on page 63 we read that the "*integuments* between the *sterno-cleidi* muscles so as to form an *all but plane surface* between them."

DISEASES OF THE BLADDER, PROSTATE GLAND, AND URETHRA, etc. By FREDERICK JAMES GANT, F.R.C.S. Pp. 470. Philadelphia, Lindsay & Blakiston.

This manual, better known as The Irritable Bladder, is here presented in an enlarged form, and embracing the considerations of prostatic and urethral disease. The affections of the kidney are discussed so far as to account for abnormal conditions of urine not dependent upon the organs included in the title. It would have been in better judgment, we think, to have treated of the kidneys and ureters as separate subjects, much being demanded by the student of the omitted organs, but little given. Disease of the urinary tract is an easily interpreted theme, while one in which the initial organ is virtually omitted is of necessity difficult to treat satisfactorily.

Judging the volume, however, by its own standard, we find that the subject matter is treated after a strictly conventional method. It presents nothing new, yet withholds nothing of importance. Among the secondary omissions may be mentioned the absence of other than incidental comment on the influence of the sexual passion upon the diseases of the urino-genital tract, and the insufficient attention the subject of perineal abscess has received. The illustrations are very inadequate. The reader can obtain no correct impression of the various urethral instruments described, since not a single figure is used in this connection.

The general reception awaiting this volume is apt, if our experience be that of others, to be a cold one, should copies with uncut leaves be the only ones offered for sale. It is not probable that one physician in five hundred values a book on account of its uncut leaves. To satisfy the small number who desire to rebind their copies, a limited issue of such would be all-sufficient; but those for general sale should have their leaves cut. Life is too short to spend any moments in simply preparing a book to be useful.

GLEANINGS FROM EXCHANGES.

THE TREATMENT OF ABSCESSSES BY HYPERDISTENTION WITH CARBOLIZED WATER (*The British Medical Journal*, November 4, 1876).—Mr. George W. Callender calls attention to the difficulty which often occurs in the treatment of abscesses, owing to their cavities being divided by septa, or extending among tissues in such a way as to be really multilocular. In such cases, when they are washed out in the ordinary way, they are not treated to advantage because parts of them are ineffectually cleansed. By hyperdistention of such abscess-sacs, carbolized water can be forced into cavities, however complicated and irregular, and this treatment can thus effect for these abscesses the same result as an ordinary injection will insure with a simple abscess. Mr. Callender describes three cases, one of angular curvature of the spine, another of disease of the lumbar vertebrae, and a third of renal calculus, each attended with abscesses of this character, and in all of which hyperdistention was most beneficial, removing all the serious constitutional symptoms at once, and speedily reducing the abscesses to small non-suppurating sinuses.

The operation may be performed while the patient is under the influence of ether, or the integuments may be frozen by the ether-spray. The following are required: a scalpel where an incision is needed, no open sinus existing; carbolic acid lotion (one part in twenty) diluted to one in thirty by the addition of warm water before using it; a perforated elastic drainage-tube; carbolized oil (one in twelve) on lint for dressing the wound, and gutta-percha tissue for covering this; some ordinary adhesive plaster; some tenax to receive any subsequent discharge (which, however, is very slight); an ordinary two- or four-ounce syringe. When it is desirable to make continuous pressure over an abscess after opening it, a pad shaped to the needs of the case, and filled with shot, will be found useful. It acts more effectually than a sand-bag, and is easily made and adapted.

The operation is begun by cutting into the abscess (if no sinus exist), the opening made being of sufficient size to admit one of the fingers. The pus is then allowed to escape, the abscess being emptied as completely as possible. The nozzle of a syringe is next passed through the opening, and the skin is drawn closely around it by the operator with his left hand; the contents of the syringe are then passed into the abscess-sac. Care must be taken, in doing this, that no pressure is made upon the abscess-wall, or the distention of the sac will be incomplete. Either by using a syringe which throws a continuous stream, or equally well by closing the wound with a finger whilst the syringe is being refilled by an assistant (very little fluid being lost in its rein-

troduction), the abscess-sac will presently distend quite to or even beyond its original size; and, under these circumstances, the carbolized water necessarily finds its way (as a rule which has few exceptions) into all parts of the cavity, however irregular, and along any channels leading from it. When the abscess has been opened, the amount of injection may be roughly measured as being rather in excess of the quantity of pus let out. When distention has been effected, the fluid is allowed to escape, and if much pus be mingled with it, a second injection may be practised. An elastic drainage-tube, its size varying with that of the abscess, is then inserted and secured, and over the end of this, and over the wound, a piece of lint, twice folded and soaked in carbolized oil, is laid. This is covered with a sheet of gutta-percha tissue and some tenax, and these dressings are secured with some ordinary plaster.

Subsequent treatment consists in the renewal of the dressings, which, to myself, it seems desirable to see to daily. The drainage-tube is gradually shortened as the abscess-wall contracts, and through its canal, if there be any sign of puriform discharge, a little carbolized water may be occasionally injected.

THE FLOW OF BLOOD THROUGH TUBES OF SMALL DIAMETER (*The Medical Examiner*, November 2, 1876).—Recently a very important paper on the above subject was presented to the French Academy of Sciences by M. Haro. He says that, after various attempts, he at last constructed an instrument which he terms a "transpirometer," and which simply consists of a capillary tube of a certain diameter. Then, adopting the word "transpirability" instead of "viscosity," he goes on to give the following conclusions:—(1) Heat much increases the flow of defibrinated blood, and this effect is much increased as the corpuscular element is larger, whilst on the serum heat has the same action as on distilled water. The inferences to be drawn from this experiment are important; thus, it is admitted that heat modifies the diameter of the small vessels and increases the force of propulsion of the blood, but it is not less certain that every change of temperature of the mass of the blood itself acts in like manner. Heat diminishes and cold increases the resistance of the blood to the vessels. (2) Carbonic acid retards the flow of the blood most decidedly. This discovery will possibly explain some physiological facts. For example, the necessity we find of breathing, which is almost uncontrollable, is explained partly by the fact that the impure blood does not flow along rapidly till it meets with oxygen; then its rate of progress is entirely altered. M. Haro thinks this is a much more plausible explanation of the fact of the case than the usual reference to the different functions of the pneumogastric nerve. In asphyxia from carbonic acid the pulse is slackened and the blood-pressure increased. He

asks whether these effects do not result from the obstruction to the capillary circulation caused by the presence of an excess of carbonic acid in the blood. (3) Pure sulphuric ether retards the flow of the blood, and withal the transpirability of ether is at nearly three times the velocity of water. These facts have an important bearing on poisoning by ether and the use of ammonia as a restorative. (4) Chloroform, which retards the flow of water and of serum, absolutely increases the flow of defibrinated blood. These facts are interesting enough, but they require to be still further developed.

IDIOPATHIC GLOSSITIS (*The Medical Press and Circular*, October 18, 1876).—Mr. Richard Croly reports that he was recently sent for to visit a man of middle age, whom he found suffering intensely from the following very distressing symptoms, the mere enumeration of which will at once portray the gravity of the case: the tongue was protruded from the mouth, enormously swollen, and very tender to the touch, its edges deeply indented by the teeth, the saliva mixed with viscid, ropy mucus, dribbling from the mouth, inability to swallow, except with considerable pain, speech "thick" and indistinct, distressed breathing, face turgid, countenance very anxious and expressive of much suffering, pulse full and rapid. Cause of illness not known, but supposed to have originated from exposure to wet and cold. He recognized this remarkable and alarming train of symptoms as characteristic of glossitis or inflammation of the tongue, a disease of not frequent occurrence, and saw that no time was to be lost, and that hesitation or delay might prove fatal. He at once made a free and long incision on each side of the tongue, from the base towards the apex, midway between the raphe and edges. In doing so he was obliged to pass the scalpel flatways along the surface of the tongue, and then turn the sharp edge downwards. Copious bleeding followed, very alarming to the bystanders, but soon ceased. The relief which the sufferer experienced was almost immediate, the engorgement rapidly subsided, so much so that but little further treatment was necessary, and the patient made a rapid recovery. The symptoms were so very urgent in this case that, if not thus promptly and boldly treated, the patient in a short time would certainly have been choked.

INJURY TO PHARYNX—EMPHYSEMA—DEATH (*Med. Press and Circular*, October 18, 1876).—A woman, æt. 52, edentulous, was eating a piece of loin of pork, and owing to the absence of teeth she swallowed the meat without masticating it. When she had nearly finished her dinner, a piece of the meat lodged in her throat. She complained at once of pain and of some difficulty of breathing, and went to three medical men and chemists for assistance, but as no one attempted to rid her of the obstruction, and as the symptoms did

not decrease, she went to a hospital. On her road to the hospital she vomited. The house-surgeon passed a Ramouner probang with ease into the stomach, and informed her that whatever might have obstructed the passage was no longer there.

Finding the œsophagus clear, the house-surgeon naturally discharged the patient, believing that all her trouble would gradually disappear. However, a few hours later she was again brought to the hospital. She had now extensive emphysema of the face, head, neck, shoulders, and chest; her respirations were forty per minute, short and catching; the pulse scarcely to be felt; the vessels of the neck dilated; the thorax was fully resonant, yet breath-sounds scarcely audible. A probang was passed freely into the stomach, and the patient drank a quarter of a pint of milk without difficulty. The laryngoscope was applied, and the pharynx was found to be emphysematous, but the larynx was sound. No injury could be seen by which the air had escaped, though it was evident that some lesion must exist.

The patient died the following morning.

At the *post-mortem* examination emphysema was found, as had been detected during life, in the cellular tissue of the head and neck, shoulders, pharynx, and œsophagus. Air also infiltrated the posterior mediastinum, and extended beneath the pleura. At the level of the cricoid cartilage a longitudinal laceration, three-quarters of an inch in length, was to be seen; and corresponding to this, on the posterior part of the pharynx, was a fine longitudinal scratch about a quarter of an inch in length, showing that a foreign body, sharp at both ends, had rested obliquely at the junction of the pharynx and œsophagus; with its lower, and, doubtless, larger extremity fixed on the cricoid cartilage. From the result of the *post-mortem* examination, it was presumed that as the patient was unable to masticate, she had inadvertently swallowed a jagged piece of bone whilst bolting her food; that the bone had become fixed in the pharynx, producing the laceration there found; that coughing and deglutition, or else the vomiting, had soon dislodged the bone after inflicting the injury; that air had at once passed into the cellular tissue beneath the pleura, and produced the dyspnœa of which she continued to complain, notwithstanding that the œsophagus was found to be clear of any obstruction. No bone was found in the stomach after death, nor any foreign body which would have produced the injury, and it had, therefore, been probably lost in the vomit.

THE Glasgow dogs are suffering from a Herod, worse than any prince of vivisectors. The police recently made a raid upon them and killed 1155.

MISCELLANY.

COLOR-BLINDNESS IN SAILORS.—According to the investigations of Drs. Feris and Favre (*Du Daltonisme dans ses Rapports avec la Navigation*), of 2408 collisions at sea from 1859 to 1866, 539 may be imputed to a wrong interpretation of color-signals at night, from the color-blindness of the captain or officer in charge. Among the shipwrecks so caused are specially mentioned those of the *Japhet*, the *Vesta*, and the English steamer *Maloma*. Of 502 sailors examined by M. Feris, 47, or 9.4 per cent., were color-blind. Of this number, 24 could not distinguish between red and green, the colors chiefly employed for signals. Stokers and engineers are among those who suffer most from color-blindness. At Lyons, M. Favre found 24 dyschromatic stokers out of 65 whom he examined in the works at Perache.

ALLEGED FAILURE OF SALICYLIC ACID.—At a meeting of the Société de Thérapeutique, October 11, 1876, Dr. Martineau reported that neither in typhoid fever nor in articular rheumatism did he obtain any influence, either on the temperature or the pulse, by the use of salicylic acid. This was confirmed by M. Dujardin-Beaumetz, who thought, however, that it calmed the articular pains.

The departmental reports made to the Government of India show that in Sikkim 385,000 cinchona trees, chiefly the red bark variety, were planted out in the financial year 1874-75, bringing up the total number in the permanent plantation to 2,765,000. The area of land under cinchona in the Nilgherry hills is reported at about 3000 acres, part government and part private plantations. During the year, 28,659 pounds of mossed bark were shipped to England, and the prices averaged about four shillings per pound. The cultivation of cinchona in the Sittand division of British Burmah was carried on with success. There were, at the close of the year, 19,234 plants growing well, and the nurseries contained 46,823 plants.

The *Dublin Medical Press and Circular* has recently been convicted of libel and mulcted in fifty pounds damages. One Mr. Betts had opened a free dispensary in Dublin, at his office, charging fourpence a head for medicines. The *Press and Circular* stated that he could not furnish proper medicines at such price. At the trial, Mr. Betts stated that, as the result of this statement, the attendance on his dispensary had largely fallen off. The *exposé* must have destroyed any professional reputation Mr. Betts may have had, and we sincerely hope, for the good of the Dublin public, both professional and lay, the attendance on his dispensary may altogether fall off.

THAT most extraordinary of medical men of the century, Dr. Brown-Séquard, two weeks ago was practising in London. As he is an-

nounced for a course of lectures, by starting at once he could probably be found in time for a consultation in the great Babylon.

DR. TIEGEL, assistant to Professor Goltz, of Strasburg, has accepted an invitation to the Professorship of Physiology in Japan.

NOTES AND QUERIES.

NEW YORK, Dec. 5, 1876.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

DEAR SIR.—In the *Times* of the 25th ult., Dr. Benjamin Lee has kindly referred to my recent paper on the Cause of Rotation in Lateral Curvature of the Spine. I regret that I was not aware that he had previously written to so much purpose on this subject, otherwise I would have been glad to enrich my essay with references to his valuable work. My excuse to him must be that of the lexicographer Johnson to a lady who asked him how he could have defined *pastern*, the *knee* of a horse. "Ignorance, madam, pure ignorance," he answered.

But Dr. Lee in his claim of priority, and your correspondent Pertinax, in making a claim for Dr. Lewis A. Sayre (June 20, 1876), have both unintentionally obscured the principal, and perhaps only, original idea in my essay, which is briefly expressed in these words (*Trans. N. Y. Academy of Medicine*, pp. 319 and 328):

"The rotation of the vertebra in lateral curvature of the spine consists in an unequal lateral displacement of the body and the spinous process, the former being free from lateral attachments and therefore departing from the median plane, while the latter is held in the median plane by its muscular and fibrous attachments. The distinguishing feature of the explanation of rotation here proposed is the recognition of the fact, heretofore overlooked, so far as I am aware, that the posterior portion of the vertebral column, being a part of the dorsal parietes of the chest and abdomen, is confined in the median plane of the trunk, while the anterior portion of the column, projecting into the thoracic and abdominal cavities, and devoid of lateral attachments, is at liberty to, and physiologically does, move to the right and left of the median plane."

A. B. JUDSON, M.D.

ONE of the assistant physicians of the State Hospital for the Insane, at Danville, Pa., resigns on account of indisposition. The undersigned will receive applications for the vacancy. Applicants must be single, graduates in medicine of a respectable school, of irreproachable moral character, and will give the date and place of graduation and the extent of their preliminary training. Address

S. S. SCHULTZ,
Danville, Pa.

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY FROM DECEMBER 3, 1876, TO DECEMBER 16, 1876, INCLUSIVE.

COOPER, GEO. H., MAJOR AND SURGEON.—Appointed Assistant Medical Purveyor with the rank of Lieutenant-Colonel, to date from December 2, 1876; vice Laub, deceased.

MAGRUDER, D. L., SURGEON.—When relieved by Surgeon McKee, to proceed to St. Louis, Mo., and report, upon arrival, by letter to the Surgeon-General. S. O. 250, A. G. O., December 4, 1876.

McKEE, J. C., SURGEON.—To report in person to the Commanding Officer Department of Arizona, for duty as Medical Director of that Department. S. O. 250, c. s., A. G. O.

BILLINGS, J. S., ASSISTANT-SURGEON.—Promoted Surgeon, with the rank of Major, to date from December 2, 1876; vice Cooper, appointed Assistant Medical Purveyor.

LIPPINCOTT, H., ASSISTANT-SURGEON.—Ordered before the Army Medical Board in session in New York City, for examination for promotion, and upon conclusion thereof to return to his proper station, West Point. S. O. 250, c. s., A. G. O.

COMEGYS, F. T., ASSISTANT-SURGEON.—Assigned to temporary duty at Fort Clark, Texas. S. O. 216, Department of Texas, November 28, 1876.